combining with the silicon-containing functional group and a terminal alkyl group combining with said silicon-containing functional group. Results of experiments conducted by the inventors show that this increases perfluoloalkylsilane, resulting in high scale, hairdye, wear and alkali resistances.

The silicon-containing functional group and the alkyl group are preferably combined with each other by dimethyl siloxane ($O-Si(CH_3)_2$). Results of experiments conducted by the inventors show that this results in high scale, hairdye, wear and alkali resistances.

The dimethyl siloxane preferably contains a straight chain combination of a silicon-containing functional group and an alkyl group or an annular combination of the silicon-containing functional group and the alkyl group. Results of experiments conducted by the inventors show that this results in stably high scale, hairdye, wear and alkali resistances.

As one example of the straight chain combination of the silicon-containing functional group and the alkyl group, an stain resistant agent containing a mixture of a first agent and a second agent described in Japanese Patent Application Publication No. 8-209118 (1996) may be employed. The first agent is a co-hydrolysate of an organic silicon compound containing a perphloroalkyl group and a methylpolysiloxane compound containing a hydrolytic group in a hydrophilic solvent, whereas the second agent is a mixture of organopolysiloxane and a strong acid. More specifically, the first agent is a co-hydrolysate of $C_8F_{17}CH_2CH_2Si(OCH_3)_3$ and $Si(CH_3O)_3CH_2CH_2-(Si(CH_3)_2O)_{10}-Si(CH_3)_2CH_2CH_2Si(OCH_3)_3$ in a

hydrophilic solvent containing a solution of 0.1N-hydrochloric acid, t-butanol and hexane. The second agent is a mixture of $HO-(Si(CH_3)_2O)_{30}-Si(CH_3)_2OH$ and methanesulfonic acid.

A large effect can be achieved in a case where the treated surface is repeatedly wetted and dried. In a portion repeatedly wetted and dried, a metal ion in the water easily combines with a hydroxyl group, whereupon stain tends to be produced. In this meaning, the ceramic product of the present invention is effective when it is a Western style flush toilet, a Japanese style flush toilet, a flush toilet for men or a basin.

An antibacterial treatment may be applied to portions other than the treated surface.

When the stain resistant treatment of the present invention is applied to an already used treated surface, a ceramic product to which no stain resistant treatment has been applied can be changed to a treated ceramic product, or the reduced stain resistant effect of the ceramic product can be improved.

The method preferably comprises a pretreatment step of reproducing a hydroxyl group on the treated surface. Consequently, the layer can exhibit high durability. As the pretreatment step, the treated surface may be rubbed using an abrasive or acid ammonium fluoride or hydrofluoric acid may be applied to the treated surface and thereafter, the treated surface may be washed in order that stain due to silicic acid (stain due to scale) may be eliminated. Furthermore, the pretreatment step may include a first step where the treated surface is washed with an acid liquid so that stain due to urine is eliminated and a second step where the treated surface is rubbed using an abrasive

subsequent to the first step, or acid ammonium fluoride or hydrofluoric acid is applied to the treated surface and thereafter, the treated surface is washed so that stain due to silicic acid (stain due to scale) is eliminated.

BRIEF DESCRIPTION OF THE DRAWINGS

Other objects, features and advantages of the present invention will become clear upon reviewing the following description of the preferred embodiments, made with reference to the accompanying drawings, in which:

FIGS. 1A and 1B show a chemical formula of a stainproofing agent and a schematic structure of a layer comprising the stainproofing agent concerning test 1 respectively;

FIGS. 2A and 2B show a chemical formula of a stainproofing agent and a schematic structure of a layer comprising the stainproofing agent concerning test 2 respectively;

FIGS. 3A and 3B show a chemical formula of a stainproofing agent and a schematic structure of a layer comprising the stainproofing agent concerning test 3 respectively;

FIGS. 4A and 4B show a chemical formula of a stainproofing agent and a schematic structure of a layer comprising the stainproofing agent concerning test 4 respectively;

FIGS. 5A and 5B show a chemical formula of a stainproofing agent and a schematic structure of a layer comprising the stainproofing agent concerning test 5 respectively;

FIGS. 6A and 6B show a chemical formula of a stainproofing agent and a schematic structure of a layer comprising the